AMENDMENTS TO THE SPECIFICATION

Please amend the Specification as follows:

On pages 4-5, ¶ [0023], amend as follows:

Controller 12 operates generally by performing the steps shown in Figure 4. Controller 12 begins its cycle by obtaining a pressure sample (element 36). Controller 12 shifts the data in buffer 26 "upward" in each register, discarding the data value in the last register and storing the newest data sample in the first register (element 38). Controller 12 computes parameter values using the data in buffer 26. For certain parameters, the first half of buffer 26 and the second half of buffer 26 are used separately (element 40). The two halves of buffer 26 may be used separately because the first half is used to define a command signal, and the second half is used to determine whether a command has been sent. For other parameters, the data in buffer 26 is used as a composite whole. The computed parameters are compared to reference values in various ways, depending on the particular parameter, to determine whether a match occurs (element 42). A "match" means the computed parameters are within pre-defined tolerances. If no match is found, the cycle is repeated. If a match is found, a command is sent to downhole tool ~~interface30~~ interface 30 to actuate downhole tool 20 (element 44).